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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,539	01/19/2007	Jean-Louis Scandella	02004.082	4433

7590  
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EXAMINER
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JENNISON, BRIAN W

ART UNIT	PAPER NUMBER
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3742

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06/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,539	<b>Applicant(s)</b> SCANDELLA ET AL.	
	<b>Examiner</b> BRIAN JENNISON	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/20/2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-37 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 38-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al (US 5,362,937) in view of Nadeau et al (US 4,733,051) and Carpenter (US 2,427,350).**

Browne teaches:

**Regarding Claims 38 and 47:** A apparatus for and method of manufacturing a hardfaced plate by applying a cladding to a surface of a substrate by arc welding **(overlaying weld metal onto metal plates or a substrate done by passing electricity through an electrode. See Column 1, lines 4-10)**, the method comprising moving the substrate **(The metal plates are moved by drive wheels 31 in a given direction relative to the welding gun 43. See Column 4, Lines 1-3)** and a continuous arc welding wire feed relative to each other **(welding wire 48 is fed through weld heads 49, relative to the plate 10, with electricity supplied to them for arc welding.**

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**See Column 4, Lines 32-35),** wherein the welding wire feed is in a direction generally transverse to said given direction of relative movement. **(Fig 1 shows the wire 48 being fed generally sideways to the plate 10. The surface is horizontal and the wire feed is vertical. The wire is clearly fed in a transverse direction since the path of the wire and the surface of the substrate make a cross, this being the definition of transverse. Fig 1 also shows the welding gun 43 mounted relative to the substrate in a transverse direction as described with the wire.)**

Browne fails to teach:

**Regarding Claims 38, 47, 49:** The substrate is cylindrical and rotated.

Browne teaches:

**Regarding Claims 39, 46 and 48-49:** Fig 1 shows the wire 48 being fed from the top side to the substrate 10 to be clad at an acute angle, with the gun also mounted at an acute angle as described above.

**Regarding Claims 40 and 50-51:** Fig 3 shows a plurality of weld beads being applied side by side and Fig 1 show the weld bead applied continuously.

**Regarding Claims 44-45, 58-61:** The weld head assembly 30 has a reciprocating carrier 40 for transverse reciprocation or oscillation of the weld head in relation to the

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surface of plate 10 with the reciprocating carrier being the means for moving the welding gun 43.

Browne fails to teach:

**Regarding Claims 41, 52-53:** A method wherein the profile(s) of the weld bead(s) is monitored.

**Regarding Claim 42, 54-55:** A method wherein said monitoring is carried out as part of a procedure to maintain a desired profile for the cladding.

**Regarding Claims 43, 56-57:** A method wherein at least one of the welding current, arc voltage, relative welding gun and substrate speeds, gun angle and stickout distances is adjusted.

Nadeau teaches:

**Regarding Claims 38, 47, 49:** Fig 1 shows the substrate being cylindrical and rotated.

**Regarding Claims 41, 52-53:** monitoring the weld bead depth. **See Column 5, Lines 19-30**

**Regarding Claims 42, 54-55:** the monitoring is carried out to maintain a desired weld bead depth and is capable of being applied to cladding. **See Column 5, Lines 25-30.**

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**Regarding Claims 43, 56-57:** the working parameters are adjusted based on monitoring, including travel speed, wire feed rate, arc voltage, pivoting the welding arm, and moving it towards or away from the substrate. **See Column 5, Lines 45-60**

In view of Nadeau et al's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Browne et al, the weld bead monitoring for a desired cladding profile, the working parameter adjustment, arc voltage, gun speed, gun angle since Nadeau teaches monitoring the depth of a weld bead to maintain a desired height and adjusting the gun travel speed, arc voltage and pivot of the arm for comparing the depth of a weld and adjusting the weld parameters to keep the weld depth at a desired depth.

Carpenter et al teaches:

**Regarding Claims 38, 47, 49:** Fig 4 shows the sheet which has been formed into a cylinder 10 rotating around a horizontal axis with cladding being applied by arc welding at the surface of the substrate. Fig 4 shows a rotatable means 18 for receiving a cylindrical substrate 10 and rotating it around a horizontal axis with a means for applying cladding to the surface of the cylindrical substrate.

In view of Carpenter et al's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Browne as modified by Nadeau, the forming the substrate into a cylindrical shape, rotating the so-formed

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cylindrical substrate about a substantially horizontal axis, rotating substrate at a level below the uppermost level of the rotating cylindrical substrate, rotatable means arranged to receive thereon a substrate to be clad, means for rotating the rotatable means, and hence a substrate received thereon, about a generally horizontal axis, and means arranged to apply, in use, of the rotating substrate at a level below the uppermost region of the rotating substrate surface since, Carpenter teaches the sheet formed into a cylinder an rotating it around a horizontal axis a rotatable means for receiving a cylindrical substrate so a continuous cladding, with uniform thickness may be continuously applied to the cylindrical surface for strengthening the cylinder using arc welding.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN JENNISON whose telephone number is (571)270-5930. The examiner can normally be reached on M-Th 7:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN JENNISON/  
Examiner, Art Unit 3742

6/18/2009  
/TU B HOANG/  
Supervisory Patent Examiner, Art Unit 3742